

Discovery

The origin of the earth's biosphere

Sabri Ahmed Kanan

Baku state university, Baku, Republic of Azerbaijan; E-mail: m.sabrikenan@rambler.ru

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General Note



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ABSTRACT

In the open doctrine the main propositions of the origin of the water or the origin of the Earth's biosphere are described in the form of 5 postulates and it is for the first time that there has been given a precise definition of the term and the value of the origin of water (its philosophical sense) which is living matter - the basis of the biosphere emerging in the Earth's atmosphere as a result of exothermic reactions of ammonia with oxygen and oxygen with hydrogen. The genetic identity of the isotopes of hydrogen atoms in the molecules of water and ammonia has been substantiated as well as of the oxygen in the biosphere and in the composition of the water molecules and metal oxides in the Earth's crust what speaks in favor of this hypothesis. There has been theoretically justified the terrestrial origin of water, and the dependence and relationship between the origin of the Earth's biosphere and the Venus's atmosphere from the evolution of the initial matter - the quarks - to the chemical elements after the Big Bang during the first stage of the formation of the planets as the main cause of the Earth's biosphere. The proof of inorganic origin of the deposits of coal and hydrocarbons and other minerals is presented as a result of favorable thermogeophysical-chemical conditions during the first stage of formation of the structure of the Earth and the second stage of the formation of the living matter of the planet Earth on the basis of already existing living matter - water, biogenic and organogenic elements, carbon dioxide and solar energy during photosynthesis which continues today. According to the results of the open doctrine there has been drafted a project for the

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clearing of the Venus's atmosphere from the greenhouse effect produced by carbon dioxide with purpose of the origin of the water and the biosphere. For the first time there has been stated the hypothesis of the origin of the highest form of living matter - a human - in the course of the Earth's second stage of evolution on the basis of living substance - water, organogenic and biogenic elements, requiring its proof by identifying the isotopes of these elements fixed in the minerals beneath the Earth's crust and in the body of the paleontological and modern man.

Keywords: Doctrine, water, biosphere, origin, Earth.

Only then we can learn the essence of things when we know their origin and development.

Aristotle

1. INTRODUCTION

Undoubtedly, for the origin of living matter there must be living substance - water as the basis of the biosphere making up the bulk of any living organism - not less than 60-70% of body weight. And how did the water appear on the planet of Earth? There are many hypotheses of the appearance of water on the globe published in various websites.

However, all of these hypotheses cannot explain, at least in theory, the origin of the water or the real causes of the biosphere of the Earth.

The question arises what elements the water originated from in space objects and which space geophysical conditions led to the emergence of a huge amount of water and the Earth's atmosphere? Hence, the essence of the water appearance, after all, is reduced to a terrestrial origin. How and from what simple terrestrial chemical elements the water can be synthesized in the natural thermogeophysical-chemical conditions of the Earth? The answer is not simple: Suppose some 3.7 billion years ago in the atmosphere of the Earth there was a high temperature of 450-550° C and a pressure of 250-300 atmospheres created by the greenhouse effect of carbon dioxide - CO₂ - and simple chemical elements: molecular hydrogen, helium, nitrogen and oxygen. Then, indeed, the physical conditions on the Earth, its chemical composition would exactly coincide with the compounds and the ammonia - NH₃- would be formed. As a result of this physical and chemical phenomenon, the deepening of this process would lead to a drop in temperature and pressure on the Earth - the reaction (1) and the first postulate of the proposed doctrine. The following Earth conditions - more moderate temperatures and pressures - have contributed the appearance of the water - reaction (2) and (3) as a result of a lightning strike in those times. The value Q in the (1,2,3) indicates to the exothermicity of the process. Indeed, by the Haber-Bosch reaction, for the first time, in 1916, in a pilot plant there was made production of synthetic ammonia of simple elements: nitrogen and hydrogen at a temperature of about 500°C and pressure of 250 atmospheres which correspond to the physical conditions on the Earth 3.7 billion years ago. The authors of this technology were awarded the Nobel Prize.

Thus, the water originated in the Earth's atmosphere rather than in the mantle and wasn't brought from space by comets and asteroids as specified in the existing hypotheses.

At the moment I finished the main part of a unique project for the liberation of the Venus's atmosphere from the greenhouse effect produced by carbon dioxide with purpose of the origin of the water and the biosphere and the ozone layer of the Venus. In this regard, for the completion of this project and the implementation of the pilot studies in terrestrial conditions, simulating the conditions of the Venus, I am suggesting cooperation with the Institute of Astrobiosphere of NASA.

Postulates presented in the doctrine:

1. There have been opened the doctrine of the water origin during the first stage of the formation of the Earth's structure or the origin of the biosphere. If we take into consideration that the thermogeophysico-chemical evolution of the terrestrial planets developed in different directions in the phenomenon of the matter appearance during the instant Big Bang, it can be assumed that in the Earth's atmosphere the concentration of chemical elements of hydrogen, helium, nitrogen, oxygen and carbon from the initial matter - the quarks - became maximum as a result of the evolution. Therefore, about approximately 3.7 billion years ago, favorable conditions for the reaction (1) were created in the Earth's atmosphere, covered with a dense gas of the above elements, at very high pressure and temperature with a sharp decrease in pressure and temperature on the surface of the planet:

$$N_2 + 3H_2 = 2NH_3 + Q.$$
 (1)

This process was also dictated by the need of the thermodynamic stabilization of Earth's atmosphere for the emergence of the aquatic environment of the Earth and for the process of photosynthesis. At present the temperature on the surface of Venus is about 477°C and the pressure is of the order of 93 atmospheres. The appearance of the water was theoretically impossible because of the lack of hydrogen in its atmosphere. Subsequent geophysical and chemical conditions on the Earth contributed to the formation of the water from ammonia and oxygen and of hydrogen and oxygen. The water of terrestrial origin is a living matter - the basis of the biosphere, but it is **combustible ash!** That is:

$$4NH_3 + 3O_2 = 6H_2O + 2N_2 + Q, (2)$$

$$2H_2 + O_2 = 2H_2O + Q. (3)$$

Here it is, the philosophy of the origin of water on Earth, and the reaction mechanism (1, 2, 3). As a result of these reactions the planet Earth was entirely covered with water, and the atmosphere of the Earth is filled mainly with molecular nitrogen, oxygen and water vapor. Due to the high temperature of the Earth's crust the evaporation of water became very intense. As a result of this process in the Earth's atmosphere, the water vapor accumulated in huge quantities and the cooling began due to the lack of solar energy on the planet and the ice ages occurred. s a result of the cooling of the Earth's crust during the subsequent era the transformation of the water vapor into ice in the atmosphere and the ice accumulations on the Earth's surface a gradual improvement in the absorption of solar energy by the Earth's surface started primarily in the equatorial zone, thus the dry land formed and the biological evolution started. These processes completed the first stage of formation of the Earth.

- 2. Oxygen, nitrogen, hydrogen and carbon formed in the structure of the Earth during the first stage of its formation after the Big Bang. Unlike the Earth's atmosphere all hydrogen and helium on the Venus were transformed to carbon and oxygen (the content was a maximum), nitrogen (total 4%) and carbon dioxide and heavier elements as a result of the evolution of chemical elements. Therefore, the atmosphere of the planet was covered with the gas of carbon dioxide resulting from the oxidation of carbon with oxygen. So the atmosphere of the planet was filled with carbon dioxide up to 96%, and the photosynthesis and the cycle of carbon and oxygen could not and cannot be carried out due to the lack of water.
- 3. The correspondence of the current stoichiometric amount of nitrogen in the atmosphere and water on the Earth is the proof of this hypothesis, because the computed quantitative value of nitrogen and water in the structure of the planet coincides with the real amounts by 80-90% as indicated in equations (2) and (3). On the other hand, the genetic identity of the isotopes of hydrogen atoms of water molecules and ammonia as well as the isotopes of the oxygen in the biosphere and water molecules, in the oxides of metals in the Earth's crust also supports this hypothesis. The presence of a sufficient amount of helium in the hydrocarbons of inorganic origin in the deposits of the Earth's crust speaks in favour of this hypothesis. The very fact of the presence of helium in the Earth's crust is a very good indicator and the confirmation of the evolutionary origin of chemical substances from the simple elements hydrogen, helium, nitrogen, carbon, oxygen etc. The study of metal oxides under the crust of the Venus which will confirm the identity of the oxygen isotope in the composition of carbon dioxide in the atmosphere of the Venus will also support this hypothesis.
- 4. The open doctrine of the origin of water as the genetic product of the reaction of ammonia with oxygen (2) and hydrogen with oxygen (3) and the subsequent geological eras laid the foundation of the origin of the Earth's biosphere. The second stage in the evolution of the living matter of planets started. All the above processes are also regulated by solar thermonuclear reactions and, as a result, the flows of solar protons, neutrons and elementary particles contributed to the formation of various chemical elements and their combinations, the deposits of coal, hydrocarbons of inorganic origin as well as the minerals of metallic and nonmetallic origin on the Earth, as a result of favorable thermogeophysial-chemical conditions, but only during the cooling of the Earth's crust and atmosphere before the period of the water and the Earth's biosphere origin. Another important factor in the formation of the biosphere is the distance of the Earth from the Sun which is optimal for the origin of the biosphere on the Earth.
- 5. Thus, the open doctrine will give impetus to the development of science, laying the foundation of a science as astrobiosphere studies, and will clarify some of the fundamental principles of modern natural science and philosophy of the biosphere. During the development of this theory we can predict the creation of an artificial climate on the surface of the other planets, in particular, on the surface of one of the closest to our planet Venus or Mars it is possible to create an atmospheric layer similar to the Earth.

2. INSTEAD OF A CONCLUSION

Theory of the origin of a man on the Earth is, probably, closely connected with the origin of the vital biogenic and organogenic elements during the Earth's formation. After the origin of water on the Earth the second phase of origin of the biosphere - living organisms – started on the basis of already arisen biogenic and organogenic elements, water, carbon dioxide and solar energy during the process of photosynthesis. Amino acids and proteins emerged on the basis of the chemical and biological revolution as well.

If we consider that billions of years of evolution had passed for the origin of the highest form of living matter - a human - then we can assume that the isotopes of above biogenic and organogenic elements fixed in the minerals under the Earth's crust must be identical to the isotopes in the body of the paleontological and modern man.

Only such research can confirm the evolutionary and Earth's origin of a man (anthropogenesis).